Docket No.: 4633-0189PUS1 **Application No.: 10/594,918 Page 2 of 15**

Art Unit 1783

Reply to Office Action of May 26, 2010

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

- 1. (Canceled)
- 2. (Currently Amended) A medical material comprising:
- a base material,
- a diamond-like carbon film formed on a surface of said base material, and
- a biocompatible component covalently bonded to a surface of the diamond-like carbon film,

wherein said biocompatible component is a polymer chain,

one end of the polymer chain is covalently bonded to the surface of the diamond-like carbon film, [[and]]

the biocompatible component and the surface of the diamond-like carbon film are bonded to each other without a linker, and

the polymer chain has a structure represented by any one of the following formulas [1]-[3]: [1]-[4]:

$$\begin{array}{ccc} --(CH_2-CH)_n & & & [1] \\ & & & \\ & & & X \end{array}$$

Docket No.: 4633-0189PUS1 **Application No.: 10/594,918 Page 3 of 15**

Art Unit 1783

Reply to Office Action of May 26, 2010

$$\begin{array}{ccc}
X \\
---(CH_2-C)_n--- \\
Y
\end{array}$$
[2]

$$\begin{array}{c}
X \\
--(CH-CH)_n--\\
Y
\end{array}$$
[3]

wherein X and Y are each an ester or amido, and X and Y when in the same molecule are identical or different from one another, and

n is an integer equal to or more than 2.

3-8. (Canceled)

- 9. (Original) The medical material of claim 2, wherein an intermediate layer is provided between the base material and the diamond-like carbon film to improve adhesion between the base material and the diamond-like carbon film.
- 10. (Original) The medical material of claim 9, wherein the intermediate layer is an amorphous film containing silicon and carbon as primary constituents.

11. (Canceled)

Docket No.: 4633-0189PUS1 **Application No.: 10/594,918** Page 4 of 15

Art Unit 1783

Reply to Office Action of May 26, 2010

12. (Previously Presented) The medical material of claim 2, wherein the base material is

a metal material, ceramic material, or macromolecular material, or a complex thereof.

13. (Previously Presented) A medical instrument formed by using the medical material

of claim 2.

14. (Original) The medical instrument of claim 13, wherein the medical instrument is a

medical instrument which is to be embedded in a living body.

15. (Original) The medical instrument of claim 14, wherein the medical instrument is a

catheter, guide wire, stent, artificial cardiovalvular membrane, or artificial joint.

16-27. (Canceled)

28. (Previously Presented) The medical material of claim 2, wherein the biocompatible

component is a polymer of hydrophilic 2-hydroxypropyl methacryl amide.

29-30. (Canceled)

31. (New) The medical material of claim 2, wherein a carbon atom of one end of the

polymer chain and a carbon atom of the diamond-like carbon film are directly bonded to each

other.

32. (New) A medical material comprising:

a base material,

Docket No.: 4633-0189PUS1 **Application No.: 10/594,918** Page 5 of 15

Art Unit 1783

Reply to Office Action of May 26, 2010

a diamond-like carbon film formed on a surface of said base material, and

a biocompatible component covalently bonded to a surface of the diamond-like carbon

film,

wherein the polymer chain and the surface of the diamond-like carbon film are bonded to

each other without a linker.

33. (New) The medical material of claim 32, wherein a carbon atom of one end of the

polymer chain and a carbon atom of the diamond-like carbon film are directly bonded to each

other.

34. (New) A medical material comprising:

a base material,

a diamond-like carbon film formed on a surface of said base material, and

a biocompatible component covalently bonded to a surface of the diamond-like carbon

film,

wherein the diamond-like carbon film has oxygen atoms bonded to carbon atoms of the

diamond-like carbon film, and

a part of the oxygen atoms is included in a hydroxyl group and another part of the oxygen

atoms except the hydroxyl group are bonded to the biocompatible component.